

WHAT IS CLAIMED IS:

1. An apparatus for inducting air for an engine, comprising:
a throttle body having a main passage formed therethrough, a throttle
5 valve mounted in the main passage, and a bypass passage bypassing the throttle valve;
and
a surge tank connected to the throttle body to receive intake air from
the throttle body,
wherein the bypass passage extends to the surge tank, and the surge
10 tank defines a chamber connected to the bypass passage.
2. The apparatus of claim 1, wherein an outlet passage is formed from
the chamber to the main passage, the outlet passage being inclined toward main passage
with predetermined angle.
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3. The apparatus of claim 1, wherein the chamber, having dimensions
capable of temporarily storing of the intake air from the bypass passage, is formed on
the periphery of the main passage with predetermined range.
- 20 4. The apparatus of claim 2, wherein the chamber, having dimensions
capable of temporary storing of the intake air from the bypass passage, is formed on the
periphery of the main passage with predetermined range.
5. The apparatus of claim 1, wherein the bypass passage extends in the
25 direction of the surge tank in parallel with the main passage.
6. The apparatus of claim 2, wherein the bypass passage extends in the
direction of the surge tank in parallel with the main passage.
- 30 7. The apparatus of claim 3, wherein the bypass passage extends in the
direction of the surge tank in parallel with to the main passage.

8. An apparatus comprising:
a throttle body defining a main passage and a bypass passage having
an inlet in the main passage;
5 a throttle valve disposed in said main passage downstream of the
bypass inlet;
a surge tank positioned downstream of the throttle valve and defining
a continuation of the main passage to receive airflow therethrough, said surge tank
further defining a bypass passage communicating with said throttle body bypass passage,
10 and an outlet from said bypass passage into the surge tank main passage.

9. The apparatus of claim 8, wherein said bypass passage outlet in said
surge tank is oriented at an angle with respect to airflow in the main passage to reduce
noise resulting from simultaneous flow through said passages.

10. The apparatus of claim 8, wherein said bypass passage in the surge
tank defines an enlarged chamber to store bypass air for supply to the main passage
upon opening of the bypass passage.

11. The apparatus of claim 10, wherein opening and closing of the bypass
passage is controlled by a solenoid valve.

12. An apparatus, comprising:
a throttle body defining a main passage and a bypass passage having
25 an inlet in the main passage;
a throttle valve disposed in said main passage for opening and closing
same;
a surge tank positioned downstream of the throttle valve and defining
(i) a continuation of the main passage to receive airflow therethrough, (ii) a bypass
30 passage communicating with said throttle body bypass passage, said surge tank bypass
passage including an enlarged chamber, and (iii) an outlet from said bypass passage into

the surge tank main passage, said outlet being oriented to direct bypass flow in a direction gradually confluent with main passage flow.

13. The apparatus of claim 12, wherein said enlarged chamber is of
5 sufficient volume to store bypass air for supply to the main passage upon opening of the bypass valve, thereby stabilizing operation of an engine receiving intake air therefrom.

14. The apparatus of claim 12, wherein the bypass valve is a solenoid valve.